

1996 MORTALITY REPORT FOR NURSING FACILITIES AND RELATED INSTITUTIONS

Prepared by

**THE TEXAS DEPARTMENT OF HEALTH
Bureau of Vital Statistics**

and

**THE TEXAS DEPARTMENT OF HUMAN SERVICES
Long Term Care-Regulatory**

EXECUTIVE SUMMARY

* In 1996, there were 27,011 deaths among residents of licensed Texas nursing facilities and related institutions (NF&RIs). Nearly two-thirds of all NF&RI resident deaths were female (n=17,693, 65.5 percent).

* The majority of deaths among residents of NF&RIs were of individuals 60 years of age or older (n=25,984 deaths, 96.2 percent of deaths). Less than one percent of NF&RI resident deaths were among individuals 21 years of age or younger (n=24 deaths).

* From birth to age 69, male deaths outnumbered female deaths. From age 70 on, female deaths outnumbered male deaths. By the age of 80, there were almost twice as many female deaths as male deaths.

* Most deaths occurred during the daytime and evening hours: 34.9 percent of deaths occurred between 7 a.m. and 2:59 p.m., and 33.7 percent occurred between 3 p.m. and 10:59 p.m.

* The vast majority, 80.9 percent of NF&RI resident deaths, occurred at the facility, while 12.3 percent died after transferring from the facility to a hospital. One and four tenths percent of NF&RI resident deaths occurred while enroute to a hospital, and 1.1 percent occurred in other locations.

* Among individuals 60 years of age or older, diseases of the heart caused approximately one-third of all deaths among both residents and non-residents of NF&RIs. Another approximately one-third of deaths among residents and non-residents 60 years or older were caused by malignant neoplasms (cancer) and cerebrovascular diseases combined. However, a larger proportion of deaths among residents of NF&RIs were due to cerebrovascular diseases (13.3 percent of resident deaths compared to 6.7 percent of non-resident deaths), while a larger proportion of deaths among non-residents were due to cancer (26.1 percent of non-resident deaths compared to 15.1 percent of resident deaths).

* Less than one percent of deaths among NF&RI residents 60 years of age or older were due to accidents, suicide and homicide combined, while 3.0 percent of deaths among non-residents were due to these three causes. Fractures, suffocations and strangulations accounted for 62.63 percent of acciden-

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tal deaths among residents of NF&RIs, compared to 29.1 percent of accidental deaths among non-residents.

This summary of deaths among residents of nursing facilities and related institutions (NF&RIs) licensed by the state of Texas is required by Section 242.134 of the Health and Safety code. In 1991, the 72nd Texas Legislature amended Section 242.134 of the Health and Safety code to change the method of reporting deaths of residents of NF&RIs. Prior to the amendment, facilities were required to make a complete report of each resident's death to the Bureau of Long Term Care, Texas Department of Health¹, which included the decedent's name, age, sex, and race; the cause of death; the time, date, and place of death; and the name and address of the facility in which the decedent resided.

The amended legislation (effective September 1, 1991) and the subsequent rules (25 TAC 145.97 effective February 1, 1992 / 40 TAC 90.127 effective September 1, 1993) recognized two important points. The first point was that much of the information previously collected from facilities was also reported on the death certificate. The second point was that, quite often, the facility had no way of knowing the official, underlying cause of death prior to submitting the death report. Facilities reported only the immediate cause of death, which was often inaccurate and provided vague or ill-defined conditions. The death certificate was, and is, the appropriate place to obtain the official and accurate cause of death, taking into account all contributing factors.

The amended legislation reduced the information collected from facilities to the name and social security number of the decedent, the date of death, and the name and address of the facility in which the decedent resided. The legislation also required the Texas Department of Human Services in cooperation with the Texas Department of Health to produce statistical reports describing patterns and trends in causes of death among residents of NF&RIs. In order to produce the reports, it was necessary to develop the capability to match and combine information collected from facilities by Long Term Care-Regulatory, Texas Department of Human Services, with information collected on death certificates by the Bureau of Vital Statistics, Texas Department of Health.

This report and subsequent reports are a cooperative effort between Long Term Care-Regulatory, Texas Department of Human Services and the Bureau of Vital Statistics, Texas Department of Health, through an interagency agreement. This information is available to the public upon request.

¹The Bureau of Long Term Care, Texas Department of Health was moved to the Texas Department of Human Services on September 1, 1993 and was renamed Long Term Care-Regulatory.

METHODS

For every death in the state of Texas, a certificate of death must be filed with the local registrar by the person in charge of interment or of removal of the body from the district (usually the funeral director) no later than ten days after the date of death. Data collected on the death certificate include the decedent's name, age, sex, and city and county of residence; the date and place of death; and all causal conditions or circumstances which led to or contributed to the death. When death results from an external cause (accident, suicide or homicide), further information is collected on the circumstances of the injury. A copy of the death certificate is retained by the local registrar in the county in which the death occurred, and the original death certificate is forwarded to the Texas Department of Health, Bureau of Vital Statistics (BVS), where it is checked for completeness and accuracy by the Records Receiving, Nosology and Statistical Services branches of the Bureau.

The cause of death is established using the Ninth Revision of the International Classification of Diseases (ICD-9). Each cause and contributing factor listed on a death certificate is categorized and coded according to the ICD-9. The single underlying cause of death is then determined through the use of a computer algorithm developed by the National Center for Health Statistics, the Automated Classification of Medical Entities, which takes into account the multiple causal factors and all medical information listed on the certificate. The process of coding cause of death is

very complex. It requires highly trained staff to use the ICD-9 rules to evaluate and code the multiple morbid and related medical conditions reported by the certifier of the death (physician, medical examiner or coroner). The accuracy and completeness of reporting by the certifier impacts the quality of the derived underlying cause of death. Although the certification process and the classification conventions are not exact sciences, they are the universally accepted method of classifying causes of death.

Nursing facilities and related institutions (NF&RIs) licensed by the state of Texas must report residents' deaths to the Texas Department of Human Services (TDHS) within 10 working days after the last day of the month in which a resident of the institution dies. Residents who were transferred from the facility to a hospital and who died within 24 hours must also be reported. The deaths reported to TDHS by NF&RIs are matched to the BVS death certificate file. Records from the TDHS file which could not be matched to the death certificate file are manually searched for discrepancies (spelling of the decedent's name, date of death, incorrect social security number, etc.) which might have prevented a match. Records matched in this manner are corrected in the TDHS database and subsequently matched back to the BVS death certificate file. BVS death records which indicate the decedent may have been a resident of a nursing facility or related institution but which could not be matched to a record in the TDHS database are returned to the facility for verification and correction. Records verified as deaths of NF&RI residents are returned to TDHS for entry into the file; records which indicate that the decedent was not a resident of a licensed nursing facility or related institution are corrected in the BVS death file.

As noted in the 1992 report, it is difficult to match data files from different sources. In 1992, 17,466 deaths were reported by NF&RIs; 17,239 (98.7 percent) of these deaths were matched to original death certificates. Based upon the results of the file matching in 1992, reporting procedures for facilities were strengthened by TDHS and file matching criteria between TDHS and BVS were improved. This resulted in a significant increase in the number of reported and matched deaths of nursing home residents in 1993. In 1993, 25,009 deaths were reported by NF&RI facilities; 24,865 (99.4 percent) of these deaths were matched to original death certificates, an increase of 44.2 percent over the number of matched deaths in 1992. In 1994, 25,000 deaths were reported by NF&RI facilities and 25,312 (99.3 percent) were matched to death certificates, and increase of 1.8 percent over the number of matched deaths in 1993. Both for 1995 and 1996, the number of deaths matched remained at 99.2%. In 1995, 26,035 deaths were reported by NF&RI facilities and 25,830 were matched to death certificates. For 1996, 27,236 deaths were reported and 27,011 matched. For this report, only the 27,011 matched deaths in 1996 from the two reporting systems are used.

Patterns in causes of death are often described using crude mortality rates and cause-specific mortality rates. Both of these statistics relate the number of deaths (total deaths for the crude rate, deaths due to a particular cause for the cause-specific rate) which occurred during a specified time period (typically one year) to the number of individuals in the relevant population group. However, it is difficult to obtain an accurate count of all NF&RI residents to use as the population base for these rates, and therefore crude and cause-specific mortality rates for residents of NF&RIs are not presented in this report. Instead, we use the percent distribution of deaths according to cause of death to describe patterns in cause of death among NF&RI residents, and to compare NF&RI residents' deaths with deaths among non-residents of NF&RIs. The percent distribution is calculated as the number of deaths due to a specific cause divided by the total number of deaths, and then multiplied by 100. It is important to note that patterns in causes of death vary widely according to age group. Because the majority of NF&RI residents are 60 years of age and older, cause of death comparisons between residents and non-residents of NF&RIs are shown only for individuals who were 60 years of age or older at the time of death.

The tabulations presented in this report are for deaths among residents of nursing facilities and related institutions

licensed by the state of Texas. Data are provided for the state and for the 11 human services regions. Deaths among residents of NF&RIs are tabulated according to the human services region in which the facility is located; deaths among non-residents of NF&RIs (the comparison group) are tabulated according to the human services region in which the decedent resided.

GLOSSARY

Bureau of Vital Statistics (BVS): The office within the Texas Department of Health charged with the implementation of the Texas Vital Statistics Law (Texas Health and Safety Code, Title 3). Functions within the Bureau include the registration, preparation, transcription, collection, compilation, and preservation of data pertaining to births, adoptions, legitimations, deaths, stillbirths, marital status, and data incidental thereto.

Cause of death: Any condition which leads to or contributes to death and is classifiable according to the ninth revision of The International Classification of Diseases (ICD-9).

External cause of death: Death caused by Accidents and Adverse Effects (ICD-9 codes E800-E949), Suicide (E950-E959), Homicide and Legal Intervention (E960-E978), and other outside causes (E980-E999).

ICD-9: The International Classification of Diseases, 9th revision. A system for classifying diseases and injuries developed by the World Health Organization and used worldwide to improve comparability of cause of death statistics reported from different countries. The ninth revision has been in use since January 1, 1979.

Licensed facility: An institution as defined in the Health & Safety Code 242.002, and includes a nursing facility and a facility serving persons with mental retardation or related conditions.

Long Term Care-Regulatory: The division within the Texas Department of Human Services that has the regulatory authority/responsibility for all licensed facilities.

Nosology: The division of the Bureau of Vital Statistics that classifies, for statistical purposes, the causes of death (based on the ICD-9) for deaths that occur in Texas and deaths of Texas residents that occur outside of Texas; the branch of medical science that deals with the classification of diseases.

Nursing facility (NF): An establishment that provides food, shelter, and nursing care to four or more persons who are unrelated to the owner of the establishment and that provides minor treatment under the direction and supervision of a physician licensed by the Texas State Board of Medical Examiners, or other services that meet some need beyond the basic provision of food, shelter, or laundry. A nursing facility may be a building, which may consist of one or more floors or one or more units, or may be a distinct part of a hospital licensed by the Texas Department of Human Services as a nursing facility.

Related institution (RI): An establishment as defined in the Health & Safety Code, Section 242.002 and includes a facility serving persons with mental retardation or a related condition.

Skilled nursing facility (SNF): A nursing facility or distinct part of a facility that is licensed by the Texas Department of Human Services and participates in the Medicare program. Skilled nursing facility requirements apply when a certified facility is billing Medicare for a resident's per diem rate.

Skilled nursing facility/Nursing facility (SNF/NF): A facility or part of a facility that is licensed and certified to participate both in the Medicare and Medicaid programs.

Underlying cause of death: The disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury.